Introduction Patterns of cough in tuberculosis influence transmission of disease yet have been little studied. We report the prevalence, duration, severity and frequency of coughing in tuberculosis.

Method The first part was a retrospective review of the medical records of all individuals diagnosed with pulmonary tuberculosis (PTB) at our hospital during 2012–3. The reported presence and duration of coughing was noted. In the second part of the study, successive patients with an ultimate diagnosis of PTB wore the Leicester Cough Monitor for 24 h prior to commencing treatment. Controls had latent TB infection (LTBI). Participants rated their cough severity from 0–100 with a visual analogue scale (VAS). Cough characteristics were compared with other clinical variables.

Results 108 cases of PTB from 2012–3 were included. 82 reported cough of median (IQR) duration 4 (1–8) weeks. There was a significant association of the presence of cough with TB sputum culture positivity (odds ratio, 11.0; 95% confidence interval, 2.5–50.0) but not gender, smoking, smear positivity, cavitory disease or extent of radiographic change. No clear predictor of the duration of cough was identified and there were too few patients to estimate the effect of TB strain.

Cough frequency was measured in subjects with sputum smear positive PTB (S+; n = 20), smear negative PTB (S−; n = 10) and LTBI (n = 11). Variability was high: median (IQR) cough rates were 238 (121–701), 126 (15–395) and 11 (7–56) coughs/24 h, respectively, and not significantly different for S+ vs. S− (figure). For active TB, cough rates were reduced overnight (2.8 [0.2–12.4] vs. 12.7 [3.3–23.4] coughs/h for night vs. day, respectively; p = 0.01). No effect of smoking was detected, nor was there a correlation between cough frequency and radiographic extent of disease, cavities or time to sputum culture positivity. Cough severity was higher for S+ than S− but also variable and the difference not statistically significant (VAS: 60 [13–94] vs. 22 [1.5–70] respectively; p = 0.41). Severity correlated with cough frequency in active tuberculosis (Spearman’s r = 0.60, p = 0.001).

Conclusion Cough in TB reduces overnight and is related to culture positivity. Bacterial burden and extent of disease may not be important. Other determinants of cough await characterisation.

Abstract S79 Figure 1 24-hour cough frequency in sputum smear-positive and smear-negative pulmonary TB and latent TB infection. Error bars: median and IQR

Background The pan London “Find and Treat” tuberculosis (TB) service includes a mobile digital X-ray unit (MXU) screening service which has been shown to be cost effective among hard-to-reach groups (homeless people, substance users and prisoners).

This study compared the impact of current practice of hostel staff encouraging MXU screening for TB among homeless people with the addition of peer educators with direct experience of TB and/or homelessness on screening uptake.

Design/methods Between February 2012 and October 2013 London homeless hostels accessing MXU TB screening were randomised to intervention or control arms by minimisation, balancing on hostel size (≤43 beds), and previous screening uptake level (≤50%). Sites with a previous MXU uptake of >80% were excluded.

At intervention sites, peers worked with hostel staff to encourage screening (through contacting and speaking with residents). The primary outcome was the proportion of eligible residents screened for TB. Blinding of participants and observers was not possible due to the nature of the intervention. Analysis was performed by intention to treat (ITT).

Results Of 59 hostels considered for eligibility, 46 were randomised (24 allocated to the control and 22 to the intervention arm – Figure 1). Across all sites, median uptake was 44% (IQR: 26–59). Control hostels had a total of 1192 residents [median uptake 45%, (IQR: 33,55)]. Intervention sites had 1150 residents [median uptake 40%, (IQR: 25,61)]. Using Poisson regression to account for the clustered study design, size of hostel, and previous screening uptake, there was no evidence for peer educators increasing uptake of screening – adjusted risk ratio 0.98% (95% CIs: 0.80,1.20).

Conclusion This study found no evidence for peer educators increasing the uptake of MXU TB screening. The wide

Abstract S80 Figure 1

*All residents apart from those currently on active TB treatment, or those who have had a CXR within the last 6 months

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Predicting and preventing re-admissions in COPD — what is the real cost?

Abstract S81 Table 1 Multivariable logistic regression model predicting all cause mortality at 1 year by gait speed

<table>
<thead>
<tr>
<th>Gait speed (quartiles)</th>
<th>Crude odds ratio (95% CI)</th>
<th>Adjusted odds ratio (95% CI)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (median 0.32)</td>
<td>11.49 (2.50–52.81)</td>
<td>8.67 (1.81–41.62)</td>
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</tr>
<tr>
<td>2 (median 0.50)</td>
<td>6.55 (1.37–31.21)</td>
<td>4.87 (0.97–24.34)</td>
<td>0.007</td>
</tr>
<tr>
<td>3 (median 0.69)</td>
<td>2.55 (0.47–13.78)</td>
<td>2.34 (0.43–12.72)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>4 (median 0.91)</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Gait speed continuous per 0.1 m/s decline 1.32 (1.12–1.55) 1.26 (1.06–1.49) 0.008

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